

**University of Nebraska at Omaha Comments on Management of Hazardous
Waste in Research and/or Academic Laboratories
Docket No. RCRA-2003-0012**

The University of Nebraska at Omaha (UNO) appreciates the opportunity to submit comments for consideration by the Agency in response to the Announcement of a Public Stakeholder Meeting on Management of Hazardous Waste in Research and/or Academic Laboratories (68 FR 33121). UNO offers the following comments in response to each of the issues identified by EPA for which input is sought.

Hazardous Waste Determinations

Agency Question: When should the hazardous waste determination be made in a laboratory setting?

UNO Response: At UNO, EHS personnel are responsible for making waste determinations. UNO believes this is a feasible, logical, efficient, and effective approach to who should conduct a hazardous waste determination. The questions of “when” and “where” are directly associated with the question of “who.” If the determination is made by EHS personnel, the determination most logically should occur when EHS personnel come in possession of the material. This approach does not relieve laboratory personnel from responsibility. They are still responsible for maintaining only needed materials (to avoid accumulation or storage of a solid waste in lieu of being abandoned) and providing detailed information regarding chemical composition and characteristics to support an accurate waste determination and safe handling by EHS personnel. This approach also facilitates waste minimization by allowing a material that is not of use in one location to be redistributed, reused, or recycled elsewhere on the campus. Determinations should be made in the laboratory only when there is not an established, alternative, centralized hazardous waste management program.

Agency Question: What training is needed for lab personnel concerning hazardous waste determinations (e.g., full RCRA training or training that is made specific to chemical management duties)?

UNO Response: When there is an established institutional waste management program and EHS personnel are responsible for making waste determinations, the training required for laboratory personnel should be commensurate with their assigned responsibilities. This would include general awareness of the existence of hazardous waste laws, knowledge of institutional procedures for securing materials prior to pickup by EHS personnel (i.e., closed containers, labeling, compatible containers of good integrity, compatible storage, etc.), procedures for requesting waste pickups by EHS staff, prohibited methods of disposal, recording/communication of waste constituents, waste

minimization/pollution prevention, and emergency response procedures (leaks, spills, releases). This training should be performance-based. Laboratory personnel should be required to obtain full RCRA training only in the absence of an institutional hazardous waste management program and when they are directly involved in making waste determinations and coordinating off-site shipment of wastes (i.e., preparation/signing of manifests, LDRs, packaging wastes, etc.).

Agency Question: How should waste be labeled so it can be appropriately managed as hazardous waste (e.g., the words “hazardous waste” or a detailed chemical description)?

UNO Response: Labeling with the words “hazardous waste” provides no benefit or enhanced protection at any level of management—in the laboratory or in the 180-day accumulation facility. However, it is vital to have the actual contents of the container recorded in standard terminology (e.g., commercial trade name or IUPAC chemical nomenclature). With the commercial trade name or IUPAC chemical nomenclature, EHS, first-responders, and laboratory personnel can locate hazard information in Material Safety Data Sheets or other published references (e.g., Condensed Chemical Dictionary, Merck Index, etc.). It is also advisable to record qualifying language on the label to distinguish between unused and used materials.

Agency Question: Where should the hazardous waste determination be made (e.g., on the bench or in the 90 to 180-day storage area)?

UNO Response: The determination should occur when the material is placed in the 90 to 180-day hazardous waste accumulation facility. This would allow for careful and controlled evaluation of materials, bench analysis (when required), and weighing of material in an area that does not interfere with teaching or research.

Satellite Accumulation Area (SAA) Accumulation Time

If more than 55 gallons of hazardous waste or more than 1 quart of acute hazardous waste is accumulated at a SAA, the excess must be removed within three days.

Agency Question: How should these requirements be applied in a laboratory context?

UNO Response: UNO supports the current application of this rule in laboratories

Agency Question: How often do laboratories accumulate more than 55 gallons of waste in their SSA?

UNO Response: Currently there are no cases at UNO where more than 55 gallons of waste would be accumulated at SSAs.

Agency Question: What, if any, difficulties do environmental health and safety personnel have responding to waste pick-up calls, e.g., within the three day time limit?

UNO Response: UNO's response to this question is framed in a broader context than just the time frame for pickups when the quantity limitations for SAAs are exceeded. Under normal operating circumstances for routine pickups (quantity limitations for SAAs are not exceeded), UNO EHS personnel strive to pickup wastes from campus locations within five working days of receiving written requests. Examples of situations that may extend the five day timeframe for routine waste pickups, but not exceed ten (10) working days, include staff illness and vacation. Other circumstances causing delays in waste pickups may include difficulty in locating reference information to support safe handling and accurate waste determinations (i.e., experimental or proprietary formulations and unknown materials) and during preparation for off-site shipments from the facility. An off-site shipment can take as long as 3 to 5-days to prepare for and complete. During this time, wastes are generally not brought into the accumulation facility.

Agency Question: How would a longer time frame for removal impact the cost of waste management and the ability to protect human health and the environment?

UNO Response: At UNO, a longer time-frame for removal of wastes from a SAA would not have a significant impact on the cost of waste management, other than a small decrease in costs realized by using larger (i.e., 55-gallon) accumulation containers, rather than the 30-gallon containers used to avoid exceeding SAA accumulation limitations.

Likewise, a longer time frame for removal of wastes from the 180-day accumulation facilities would not have a significant impact on the cost of waste management. This is because current UNO contract pricing does not provide for mobilization fees by the waste vendor. However, other colleges and universities may realize great savings. Smaller colleges and universities may not generate the volume of waste needed to attract competitive pricing structures. Their greatest savings would come from limiting the number of waste shipments to avoid mobilization fees and facilitate the accumulation of quantities significant enough to allow for waste consolidation (bulking). Increasing the period of time that materials are accumulated prior to off-site shipment should not negatively impact human health and the environment because adequate precautions are already prescribed by regulation (e.g., weekly inspections, contingency plans, etc.).

Treatment in SAAs

Agency Question: What types of treatment, other than neutralization, are laboratory personnel currently performing or would like to perform?

UNO Response: At UNO, treatment is limited to activities to facilitate safe handling and transport of specific chemicals (e.g., removal of accumulated peroxides from ethers, wetting of picric acid, etc.).

Agency Question: What would be the benefits of the desired types of treatment?

UNO Response: The benefits of on-site/in-lab treatment include progress toward waste minimization goals, and most importantly, enhanced safety.

Other Issues

Definition of SAA: At some institutions, laboratories with similar processes/research goals are often grouped in specific areas of a building and generally share or use similar equipment and other resources. For example, several laboratories may have x-ray film processing equipment and generate spent fixer. In these cases, it would be desirable to have a single accumulation drum to serve a group of common laboratories. The SAA rules, as presently written or applied, may not allow for this arrangement. Rather, each laboratory may need to be supplied with an individual drum. This creates space-use concerns (laboratories are generally very small with no available, additional space) and safety concerns (more drums in a concentrated area). A better approach would be to allow for the use of a single drum by multiple users and placement of the drum in a common-use area that may not be at or near the point of generation, but is still under the control of the person(s) generating the waste. This approach would be more efficient and result in greater protection of human health and the environment.

Facility Definition: Many colleges and universities, including UNO, have non-contiguous campuses and areas of campus bisected by public roads. Because of this situation, many have two or more 90- or 180-day accumulation facilities and EPA ID numbers. This duplication of facilities and associated duplicate plans (i.e., contingency, training, etc.) operating procedures (i.e., inspections, etc.), and equipment (i.e., spill supplies, handling equipment, etc.) is inefficient and costly. It reduces the ability to process wastes for cost-effective disposal (i.e., packaging and bulking). In addition, waste accumulation facilities are expensive to construct and operate. For example, UNO included two separate waste accumulation rooms in its new Peter Kiewit Institute (on the South Campus), removing as many as 400 ft² of research space for this purpose, at a

cost of about \$150,000. Five years earlier, a similar investment was made to convert a research area on the North campus to a waste accumulation area. The North and South Campuses are less than 1 mile apart. Utilities and energy consumption are tremendous in these types of facilities, which are often designed with walk-in and bench-top fume hoods, single pass HVAC systems, etc. Provisions that would allow for a single accumulation facility to serve both campuses would be highly desirable from the perspective of both environmental protection and cost effectiveness.

State Recognition: We applaud EPA for encouraging Regions and States to utilize existing policy interpretations to allow flexibility in the application of RCRA at colleges and universities. We also recognize and appreciate EPA's sector and special initiatives. We encourage EPA to utilize their existing influence and authority to achieve nation-wide consistent enforcement of the regulations.

Sincerely,

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